# Roadway Rehabilitation

State Route 53 in Lake County, near the intersection with 40th Avenue

01-LAK-53-PM 2.95/7.45

EA 398600

## Initial Study with Proposed Negative Declaration

Prepared by the

State of California Department of Transportation

**April 2007**

Caltrans

# General Information About This Document

## *What's in this document?*

The California Department of Transportation (Caltrans) prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project located in Lake County, California. The document describes why the project is being proposed, alternatives for the project, the existing environment that could be affected by the project, and potential impacts from each of the alternatives, and the proposed avoidance, minimization, and mitigation measures.

## *What should you do?*

- Please read this Initial Study. Additional copies of this document are available for review at the Lake County Library, Redbud Branch, 14785 Burns Valley Road, Clearlake, CA 95422. This document and associated technical studies are also available for review at the Caltrans District 3 office at 703 B Street, Marysville, CA 95901.
- The document is also available at the following website: www.dot.ca.gov/dist1/d1projects/envdocs.htm
- We welcome your comments. If you have any concerns regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to Caltrans at the following address:

  Susan D. Bauer, Senior Environmental Planner
  Environmental Branch M1
  California Department of Transportation
  P.O. Box 911
  Marysville, CA 95901

  Submit comments via email to: Sue_Bauer@dot.ca.gov
- Submit comments by the deadline: April 30, 2007

## *What happens next?*

After comments are received from the public and reviewing agencies, Caltrans and the Federal Highway Administration may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Susan D. Bauer, Environmental Branch M1, P.O. Box 911, Marysville, CA 95901; (530) 741-7113 Voice, or use the California Relay Service TTY number, (530) 741-4509.

SCH# _____
01-LAK-53-PM 2.95/7.45
EA 398600

Road Rehabilitation on State Route 53 in Lake County, from postmile (PM) 2.95 to PM 7.45

# INITIAL STUDY
## with Proposed Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

28 March 2007
Date of Approval

John D. Webb, Chief
North Region Environmental Planning
California Department of Transportation

# Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

### *Project Description*

The California Department of Transportation (Caltrans) proposes to install or extend turn pocket lanes, widen the shoulders, replace sections of guardrail, add shoulder backing and rumble strips, upgrade intersection lighting, extend and rehabilitate culverts, improve the stormwater drainage system, and repave the surface of the roadway on State Route 53 in Lake County from postmile 2.95 to 7.45.

### *Determination*

This proposed Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this project. This does not mean that Caltrans' decision regarding the project is final. This Negative Declaration is subject to modification based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The proposed project would have no effect on air quality, noise levels, farmlands, cumulative impacts, population and housing, recreation or parklands, utilities and public services, traffic patterns.
- The proposed project would have a less than significant effect on floodplains, cultural resources, visual resources, water quality, geology, hydrology, and hazardous waste.
- The proposed project would have a less than significant effect on biological resources with the following minimization and mitigation measures incorporated:

    - Migratory birds will be protected in accordance with the Migratory Bird Treaty Act
    - The project may affect, but is not likely to adversely affect the federally threatened valley elderberry longhorn beetle (VELB). Direct impacts will be avoided by protecting VELB habitat through the use of temporary, plastic mesh-type fencing to prevent inadvertent damage to the shrub during construction.
    - In order to compensate for the loss of oak trees and satisfy the intent of Senate Resolution 17, compensation will be provided by a combination of creating new oak woodlands and preserving established oak woodlands.

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John D. Webb, Chief — Date of Approval
North Region Environmental Planning
California Department of Transportation

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# List of Abbreviated Terms

| | |
|---|---|
| ac | acre |
| ADI | Area of Direct Impact (cultural resources) |
| ADL | Aerially Deposited Lead |
| APE | Area of Potential Effects (cultural resources) |
| BE | Biological Evaluation |
| BMP | Best Management Practices (water quality) |
| BO | Biological Opinion |
| Caltrans | California Department of Transportation |
| CDFG | California Department of Fish & Game |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CNDDB | California Natural Diversity Database |
| dbh | diameter at breast height (biology) |
| ESA | Environmentally Sensitive Area |
| FEMA | Federal Emergency Management Agency |
| FHWA | Federal Highway Administration |
| ft | foot/feet |
| HPSR | Historic Property Survey Report |
| IS | Initial Study |
| MBGR | metal beam guard rail |
| MBTA | Migratory Bird Treaty Act |
| NEPA | National Environmental Policy Act |
| NES | Natural Environment Study (biological resources) |
| NHPA | National Historic Preservation Act |
| NOA | Naturally Occurring Asbestos |
| NRHP | National Register of Historic Places |
| PM | post mile |
| RTP | Regional Transportation Plan |
| NEPA | National Environmental Policy Act |
| NES | Natural Environment Study (biological resources) |
| NFIP | National Flood Insurance Program |
| RTIP | Regional Transportation Improvement Program |
| RWQCB | Regional Water Quality Control Board |
| SHPO | State Historic Preservation Office |
| SR | State Route |
| SWPPP | Storm Water Pollution Prevention Plan |
| SWRCB | State Water Resources Control Board |
| USACE | U.S. Army Corps of Engineers |
| USFWS | U.S. Fish & Wildlife Service |
| VELB | valley elderberry longhorn beetle |

# Chapter 1 Proposed Project

## 1.1 Introduction

The California Department of Transportation (Caltrans) is planning a project to rehabilitate the roadway in an effort to improve traffic safety along State Route 53, in Lake County. This project begins near the town of Clearlake, starting 650-feet before the intersection of 40th Avenue/Lakeshore Drive and State Route 53 at PM 2.95. From this point traveling north, the project limits end at the junction with State Route 20 (PM 7.45). The project limits cover approximately four miles of State Route 53. This Northern California rural arterial traverses Lake County as a principal highway that eventually connects into the town of Lower Clearlake. This highway provides a moderate level of service and accessibility for interregional movement of people, goods, agriculture, and recreational travel across the northern part of the state. Officially adopted into the highway system in 1919, this facility was rebuilt on a new alignment in 1956 with two traffic lanes (one lane in each direction) and shoulder widths that vary from essentially no shoulder to 4-foot wide shoulders. Building the highway through a rolling, mountainous terrain left a combination of hillsides that were cut and low-lying areas that were filled. Generally, the hillsides have steep incline slopes.

The majority of the proposed roadway modifications will be concentrated at four intersections where county roads Polk Street, Olympic Drive, Old Highway 53, and Ogulin Canyon Road connect into State Route 53. At these intersections the prism of the roadway will be widened to accommodate the addition of new turn-pocket lanes or extension of the existing turn-pocket lanes. Shoulders will be widened to 8-feet throughout the entire project limits. Additional proposed improvements include replacing the guardrail, installing shoulder backing and rumble strips, improving the stormwater drainage system, rehabilitating culverts, paving the surface of the roadway, and adding street lights at the intersections.

This proposed project, identified as a Roadway Rehabilitation and Restoration Project, is a candidate for funding under the 2010 State Highway Operation and Protection Program (SHOPP) with an estimated cost of $16.4 million. The SHOPP is a four-year program of projects that have a purpose of collision reduction, roadway preservation, or mobility enhancement.

## 1.2 Purpose and Need

The California Vehicle Code and federal regulations require the State of California to have an accident data collection system to identify the number and severity of accidents on California highways. Accordingly, Caltrans developed the Traffic Accident Surveillance and Analysis System, which is an electronic database to analyze the amount of traffic, the number of accidents, and other types of statistical highway data. Upon analysis, the data can reveal actual and average accident rates, total accidents, number of vehicles involved, whether or not any fatalities or injuries occurred, road conditions, and time of day when the accident occurred. Typically, when Caltrans is considering allocating funds for a future project, the three-year traffic accident history data is used to support the need for the project.

### 1.2.1 Purpose

The purpose of this project is to rehabilitate a segment of State Route 53 in Lake County in order to improve the ride quality, extend the service life of the roadway, and reduce the number and severity of accidents. This can be accomplished by adding a two-way left turn pocket lane between Polk Street and Olympic Drive and between Old Highway 53 and Ogulin Canyon Road, constructing a right turn pocket lane at the four intersections, widening the roadside shoulders, repaving the asphalt surface, and rehabilitating the existing drainage system.

### 1.2.2 Need

State Route 53 within the project limits is aging while the use of this facility is increasing. The asphalt surface of the roadway slowly deteriorates through normal wear and tear from vehicular traffic. Due to constant traffic and excessive truckloads, some areas of the pavement are showing signs of distress through cracking and rutting. Rutting is a term used to describe a longitudinal surface depression in the wheel path. Movement of the roadbed material under pressure from heavy truckloads causes this abnormality in the road surface. The quality of the ride for motorists is compromised because of the unsmooth surface and poor pavement conditions. Rehabilitating the pavement with a new layer of open-graded asphalt concrete will renew the surface of the roadway.

In addition to the need for rehabilitating the pavement, the three-year accident data (collected from 1996 through 1999) depicts an accident rate within the project limits that is higher than the statewide average. The majority of accidents that occurred in this segment were broadsides, sideswipes, and rear end collisions concentrated at the

intersections of Polk Street, Olympic Drive, Old Highway 53, and Ogulin Road. At the intersections where there are no turn pockets, vehicles stopping to make turns block the through lane causing the following traffic to slow down and backup. Turn pockets will provide storage for vehicles waiting to turn while allowing thru traffic to keep moving.

Many of the highway standards have changed over the years. Since most of the highway systems were built over 50 years ago, many of the design standards used to build the original highway are no longer the same as current design standards. State Route 53 existing shoulder widths are considered narrow compared to the current standard for shoulder widths. Some portions of this highway do not have a shoulder wide enough for a vehicle to pull over should a driver experience mechanical problems. Current design standards now require a minimum 8-foot shoulder width. Widening the shoulders to the current standard will provide ample room for a car to safely pull over.

## 1.3 Alternatives

### 1.3.1 Build Alternative

The proposed project would include improvements to State Route 53 at the four county road intersections as follows:

- Polk Street (PM 3.58) – At this location, the project would widen the roadway prism to install a left turn pocket lane. This lane will channelize traffic attempting to turn onto Polk Street. Current conditions leave a vehicle stopped on the highway while waiting for traffic headed in the opposite direction to clear before turning onto Polk Street. The turning lane would continue on through the next intersection (Olympic Drive).

- Olympic Drive (PM 3.92) – At this location, the project would extend the existing northbound left-turn pocket lane to the south. An acceleration lane would be provided for traffic that is traveling eastbound on Olympic Drive and attempting to merge northbound onto State Route (SR) 53. A deceleration lane would be added for traffic traveling southbound on SR 53 attempting to turn right (westbound) onto Olympic Drive. In addition, an acceleration lane would be added for traffic turning right from Olympic Drive onto southbound SR 53.

- Old Highway 53 North (PM 4.88) – At this location, the project would install a northbound left-turn pocket lane that would continue on to Ogulin Canyon Road and widen the roadway to increase the corner radii to improve turning movements.

- Ogulin Canyon Road (PM 5.05) – At this location, the project would install a southbound left-turn pocket lane and a northbound right-turn deceleration lane on SR 53.

Additional proposed improvements include shoulder widening, replacing guardrail, repaving, adding shoulder backing and rumble strips, drainage changes, and improving intersection lighting.

In order to improve the damaged surface of the roadway, this project would replace the failed pavement with a new layer of open-graded asphalt concrete (OGAC). This paving operation is called an overlay. Overlaying the failed pavement with a new layer of OGAC will provide skid resistance and is designed to accommodate rapid surface drainage to prevent hydroplaning. The overlay will require the existing metal beam guardrail (MBGR) to be adjusted to the proper height and the end treatments upgraded to current guardrail standards. Measures will be taken to inhibit weed growth underneath the MBGR to reduce maintenance costs.

Drainage improvements will entail extending and rehabilitating the existing culverts, and installing two underdrains. The purpose of installing underdrains is to alleviate pavement deterioration by lowering the water table beneath the structural sections of the roadway. The underdrains will intercept, collect, and discharge the ground water away from the roadway. Terminal and intermediate risers will be placed for the convenience of cleaning debris out of the system. Widening the prism of the roadway to accommodate wider shoulders will require extending the existing cross culverts. Most of the culverts were placed in the mid-1950's when the highway was originally constructed. Since that time, most of the culverts have reached the end of the designed service life and are showing signs of deterioration. Culverts will be rehabilitated by lining them with a plastic pipe insert.

Additional right-of-way will be required. The exact amount of additional right-of-way or the number of parcels affected is not definitive until the project transitions from preliminary design to final design. At the current stage of project development, it is expected that sliver-shaped areas from the frontage of parcels that abut the

highway would be affected. The need to relocate businesses or residences is not anticipated.

The flashing beacon at PM 7.26 will need to be relocated to accommodate the shoulder widening and to maintain the clear recovery zone. A rumble strip will be placed in the shoulder to alert drivers who begin to drift away from the travel lane. Intersection lighting will be added at Polk Street, Old Highway 53, and Ogulin Canyon Road. Existing intersection lighting at Olympic Drive will be upgraded.

### 1.3.2 No-Build Alternative

A No Build Alternative is included to provide a baseline, when compared to the Build Alternative, to evaluate the magnitude of the proposed changes and to measure those environmental effects to those changes. With a No Build Alternative, no action would be taken to rehabilitate the roadway and no improvements would be made to improve safety. Obviously, no environmental impacts would occur from the No Build and the existing conditions of the roadway would continue to deteriorate. This alternative would not include all of the proposed design improvements that are expected to improve ride quality, extend the service life of the roadway, and reduce the severity of accidents.

## 1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for the project construction:

| Agency | Permit/Approval |
|---|---|
| United States Army Corps of Engineers | Section 404 Permit for filling or dredging waters of the United States |
| California Department of Fish and Game | 1602 Agreement for Streambed Alteration |
| Central Valley Regional Water Quality Control Board | Section 401 Water Quality Certification |

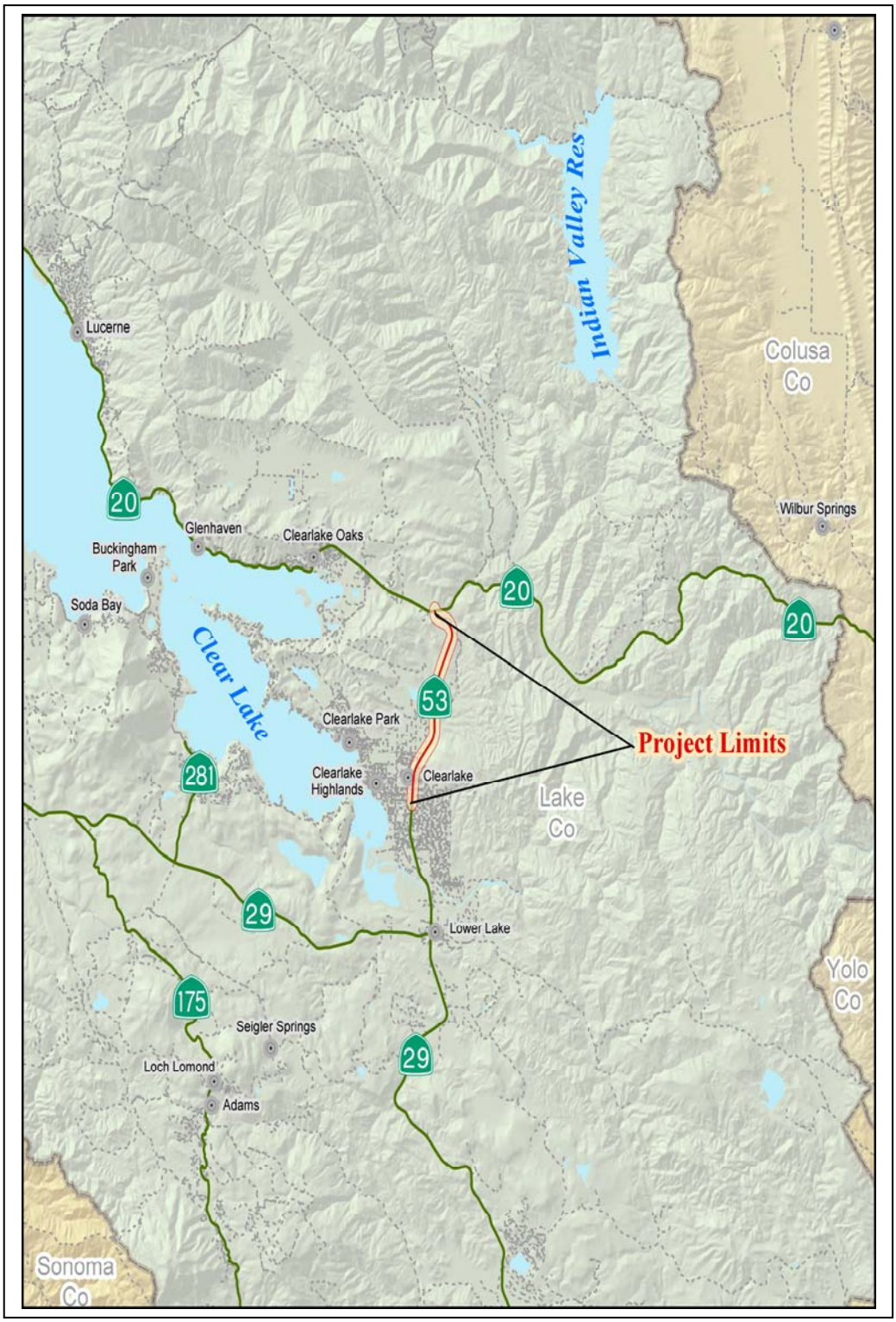


**Figure 1-1 Project Vicinity Map**

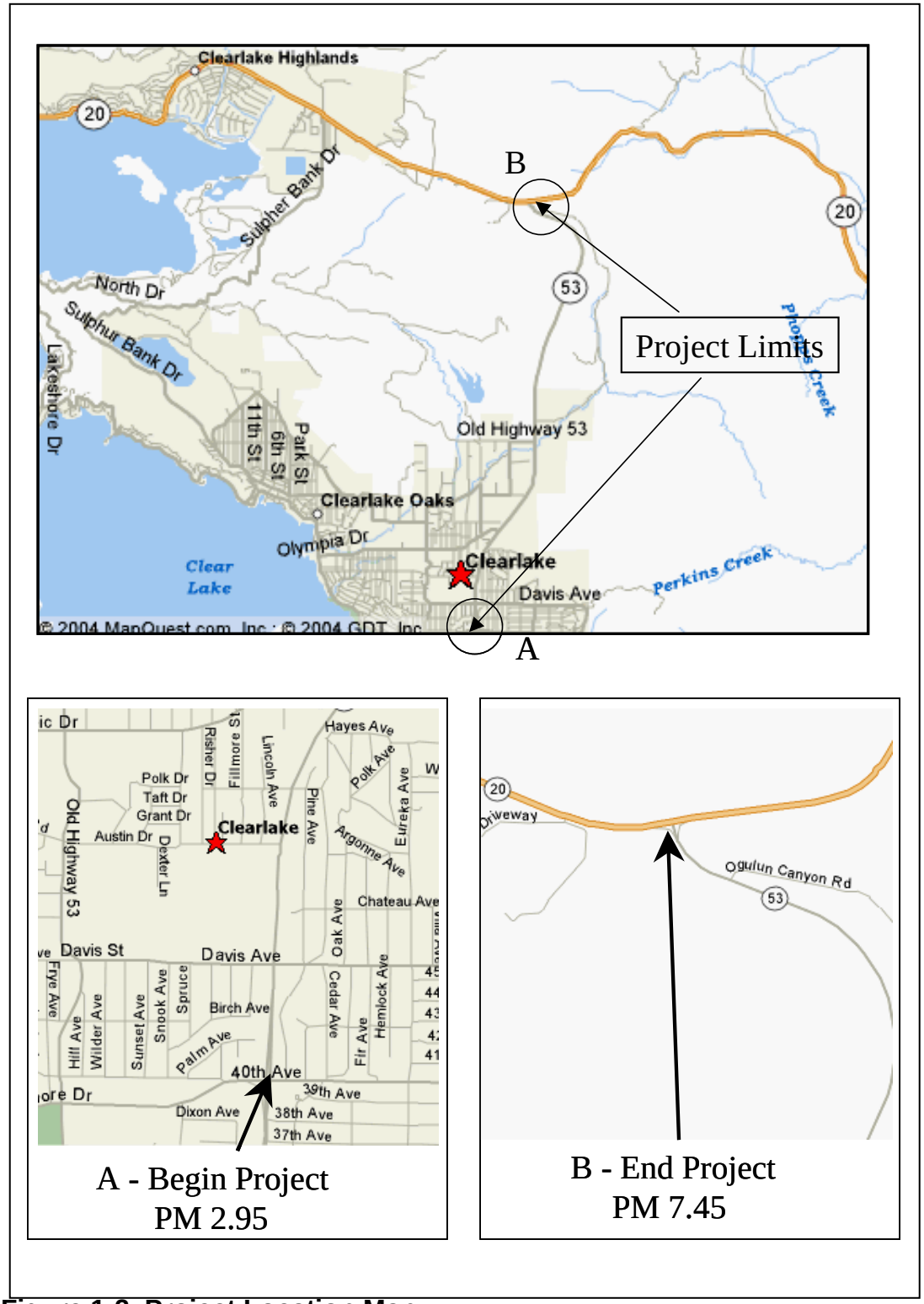


**Figure 1-2 Project Location Map**

# Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

This chapter explains the impacts that the project would have on the human, physical, and biological environments in the project area. It describes the existing environment that could be affected by the project and potential impacts from each of the alternatives.

As part of the scoping and environmental analysis conducted for the project, the following environmental issues were considered, but no adverse impacts were identified. Consequently, there is no further discussion regarding these issues in this document.

- Growth— The project will not provide for an increase in traffic capacity and will not contribute to growth in the surrounding area.
- Farmlands—Prime farmland is defined as soil that particularly produces general crops such as common foods, fiber, forage, and oil seed. Unique farmland produces specialty crops such as fruits, vegetables, and nuts. Because there are no prime or unique farmlands associated with the project site, farmlands were dismissed from detailed analysis.
- Community Impacts—The project is located in a rural area. Even though there is a need for additional right-of-way, very few parcels are occupied by either a residence or business. During construction, for those properties that have a driveway connecting directly into SR 53, at least one point of access will remain open.
- Utilities—The need to relocate utilities or a disrupt services are not anticipated.
- Traffic and Transportation/Pedestrian and Bicycle Facilities—Construction and temporary lane closures will not inconvenience pedestrians or cyclists because there are no existing pedestrian crossings or designated bicycle lanes. Commuters may experience a delay in traffic but advance notices will be displayed on portable, changeable message signs to forewarn travelers.
- Paleontology—Studies under this specialty are not applicable to this project.

- Air Quality—The screening process outlined in the "Transportation Project-Level Carbon Monoxide Protocol" (Institute of Transportation, U.C. Davis, 1997) was used to determine that the proposed project will not impact the air quality of Lake County because of the following reasons: the project will not increase the number of vehicles operating in cold start mode; traffic volumes will not increase significantly; traffic flow will not worsen. Since the proposed improvements will not have a substantial influence on the capacity of the highway or the composition of traffic patterns, the project is exempt from any regional conformity analysis per 40 Code of Federal Regulations, Section 93.126, Table 2.
- Cumulative Impacts—Caltrans adopted a Negative Declaration for an Intersection Improvement Project (EA 466400) that will modify the intersection of SR 53 and 40th Avenue/Lakeshore Drive. With mitigation, the Intersection Improvement Project will have less than significant impacts to the environment. The current proposed Road Rehabilitation Project overlaps the same intersection. This roadway will be repaved. Even though the limits of the two Caltrans projects overlap, no cumulative impacts will occur since no impacts will occur as a result of the paving operation.

## 2.1 Human Environment

### 2.1.1 Land Use

The Lake County Planning Department developed and published the *2005 General Plan* to identify future planning issues and to designate various types of land uses for the communities within Lake County. This document outlines the different types of agricultural uses, such as prime farmland, vineyard soils, or grazing lands, along with different types of residential reserves, such as rural, suburban or low density.

#### 2.1.1.1 Existing and Future Land Use

***Affected Environment***

According to the General Plan, the project area portion of State Route 53 traverses an area designated as rural residential. There are several residential houses, and a few commercial and vineyard businesses that have property lines abutting Caltrans right-of-way. In some locations, widening the roadway will require additional right-of-way.

### *Impacts*

Approximately 26 parcels would be subject to permanent right-of-way acquisition. A total of approximately 3-acres of additional land is needed to construct this project. The anticipated right-of-way takes consist of sliver-shaped strips of privately owned land. The majority of these parcels are undeveloped and vacant of any homes or businesses. Additional right-of-way is needed on both sides of the highway. The proposed right-of-way acquisition would change the designated land use from residential to highway.

### *Avoidance, Minimization, and/or Mitigation Measures*

Additional offsets may occur during the final design stage to further narrow the footprint. Property owners who are affected by right-of-way acquisition will be compensated the fair market value for the portion of land acquired by Caltrans.

## 2.1.1.2 Consistency with State, Regional, and Local Plans

### *Affected Environment*

At the time this environmental document was written, a Caltrans Route Concept Report, which is a planning document that describes Caltrans's conceptual improvements for a given route, was not available for State Route 53. Although Caltrans has not yet published a long-term planning guide for State Route 53, the *Lake County 2005 General Plan* and the *Regional Transportation Planning Work Program* were available for determining whether or not this project would conflict with any future planned projects proposed by the County. The Planning Council for Lake County prepared the *Regional Transportation Planning Work Program* to profile the transportation needs, maintenance repairs, and improvement efforts for the local streets. Based on these two documents that outline future planned projects, it appears that this Caltrans project is compatible with the improvement goals and strategies set forth by the Lake County Planning Department.

### *Impacts*

The proposed project will modify the intersections where local streets and private driveways connect into the highway. Although these changes will not conflict with any future project planned by the City Area Planning Council for Lake County, construction may cause a change the flow of traffic due to temporary lane closures.

### *Avoidance and Minimization Measures*

If lengthy delays are anticipated, the contractor will be required to place appropriate signage to notify motorists that traffic may be subject to delay. In addition, the contractor will be required to maintain at least one point of entry to residences and businesses during construction.

## 2.1.2 Visual/Aesthetics

This section describes existing local conditions and the potential impacts of the proposed project to aesthetic and visual resources. Visual impacts were assessed in terms of the anticipated changes to the landscape, and the likely response of the public. Because this is a rural area, the largest viewer group affected is the traveling public.

### *Regulatory Setting*

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings [42 United States Code 4331(b)(2)]. To further emphasize this point, the Federal Highway Administration in its implementation of the National Environmental Policy Act [23 United States Code 109(h)] directs that final decisions regarding projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

Likewise, the California Environmental Quality Act establishes that it is the policy of the state to take all actions necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities" [California Public Resources Code Section 21001(b)].

### *Affected Environment*

The project begins near the town of Clearlake. From this point traveling north, the highway descends gently through moderately rolling terrain into the relatively flat, broad Burns Valley. At the north end of Burns Valley, the highway climbs gently through moderately steep terrain to intersect with State Route 20. Views along State Route 53 consist of a rural agricultural landscape north of Olympic Drive. Traveling south towards Lakeshore Drive, the views along State Route 53 change to residential

and urban development. The highway appears to be rural in character although the highway is in the middle of an urban development. Views adjacent to the highway change as the existing cut and fill slopes vary in height. These cut and fill slopes are mostly covered with tall grass with some exposed soil where slope failure has occurred. The visual backdrop from the highway is rolling foothills with scattered groups of mature, native California oak trees punctuated by a grassy understory. Some groups of trees form a canopy over the roadway. This segment of the highway is eligible for designation as a State Scenic Highway. The benefit of a scenic highway is that the designation encourages the protection and enhancement of this highway. Projects performed by Caltrans are evaluated for the possibility of impacting the views identified as scenic to ensure there may not be a negative change in the visual quality in the view shed.

### *Impacts*

Preliminary design shows a majority of the proposed cut and fill slopes to be small in scale; however, there are a few locations where the topography and proposed highway alignment will require medium to large scale cut and fill slopes. The combination of the larger cut slopes and the removal of existing vegetation will create visual impacts to the scenic character of the highway. Vegetation removal would open up views to residential and commercial development, potentially reducing the rural visual character for this section of State Route 53.

The greatest visual impacts created by this project will be at locations where there are large cut or fill slopes. Areas expected to experience the most visual changes include the north and south sides of Polk Avenue, the north and south sides of Olympic Drive, and between the following engineering stations: 44+00 to 46+00, 51+00 to 52+00, 57+00 to 58+00, and 70+00 to 73+00. (Please see aerial layout pages 5, 6, 13, 14, 15, 16 under Appendix D "Environmental Study Limits Mapping." These layout pages show the station numbers labeled along the centerline of the highway.) The blue dashed line on the aerial mapping represents either hillsides that need to be cut back, or low-lying areas that need to be filled, depending upon site-specific topography. Typically, the areas between the blue dashed line and the edge of the shoulder are prone to the greatest degree of ground disturbance.

### *Avoidance, Minimization, and/or Mitigation Measures*

Even though the highway has not yet been officially designated as a Scenic Highway, every effort should be made to maintain and enhance the scenic quality of this section of highway. To minimize the degree of visual change and reduce impacts to a less

than significant level, Caltrans Landscape Architecture recommends a combination of the following measures:

- Consider medium to large cut or fill slopes at 2:1 distance to height ratio. Unlike 4:1 slopes that require more ground disturbance, steeper slopes would lessen the amount of native vegetation that needs to be removed.

- Consider small-scale cut or fill slopes at 4:1.

- A retaining wall with an aesthetic treatment should be considered at the intersection of SR 53 and Olympic Drive to avoid impacts to the adjacent buildings. The aesthetic treatment should be similar to existing retaining walls at the intersection of SR 29 and SR 53, or the retaining wall along SR 20 in the community of Nice.

- Areas stripped of native vegetation should be replanted, where possible. The landscape architect and the biologist will identify potential sites for re-establishing plants onsite. Candidate sites would be located within Caltrans right-of-way and outside of the clear recovery zone. If there is inadequate area, other locations for re-planting should be identified. These locations should be as close to the project area as possible. Another alternative would be to provide a monetary amount for preserving existing oak woodlands.

### 2.1.3 Cultural Resources

This section provides information on cultural resources that occur, or could occur, within the proposed project area. This section details the results of the field investigations and discloses the potential impacts to cultural resources.

#### *Regulatory Setting*

"Cultural resources" as used in this document refers to historic and archaeological resources. The primary federal laws dealing with historic and archaeological resources include:

The National Historic Preservation Act, as amended, sets forth national policy and procedures regarding historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal

agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2004 a Section 106 Programmatic Agreement among the Advisory Council, the Federal Highway Administration, the State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement takes the place of the Advisory Council's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans.

Historical resources are considered under the California Environmental Quality Act, as well as California Public Resources Code Section 5024.1, which established the California Register of Historical Resources. Section 5024 of the Public Resources Code requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way.

### *Affected Environment*

In January 2007, Caltrans staff completed a Historic Property Survey Report that contains detailed information on the various identification efforts and archival research conducted to identify any known archaeological or cultural heritage sites within the project area. Efforts to locate cultural resources within the Area of Potential Effects (APE) consisted of literature research, systematic field surveys, Native American consultation, and the solicitation of comments from the Lake County Historical Society. These identification efforts resulted in the discovery of two archaeological sites and five isolated artifacts that consisted mainly of obsidian flakes. Of these two previously undiscovered archeological sites, one site has multiple components, meaning the site contains both historic and prehistoric remnants. The other one is a prehistoric archeological site.

### *Impacts*

The first site, CA-LAK-2189/H, is a multiple component site, which consists of a prehistoric lithic scatter and refuse scatter, found within the archaeological APE. This site does not retain integrity nor does it meet the significance criteria for listing on the National Register of Historic Places (NRHP). The State Historic Preservation Officer (SHPO) concurred with this finding on November 29, 2006.

Portions of the second site, CA-LAK-2190, fall within an area that will be directly impacted by project construction. In such cases, the term Area of Direct Impact (ADI) is used to refer to the portion of the site that lies within the area of direct disturbance. Scientific methods of information recovery, including Phase II excavations, were used to evaluate the significance of the site. These investigations determined that the portion of the site within the ADI was sparse and already highly disturbed from prior construction of the highway. Based on the archeological information retained from this site, it was determined that the site did not yield important information to better understand prehistory or history; therefore, the portion of the site within the ADI does not contribute to the ultimate determination for National Register eligibility. Caltrans is requesting concurrence from the SHPO that this portion of the site is not eligible for listing on the National Register. The remainder of the site will be protected from inadvertent damage by establishing that area as environmentally sensitive through the use of exclusionary fencing.

In summary, this project will not affect any archaeological sites that are eligible for listing on the National Register. Even though there is an archaeological site that will be directly impacted, the information ascertained through the identification and evaluation process determined the site does not retain sufficient integrity to be eligible for the National Register. Therefore, a Finding of No Adverse Effect has been made by Caltrans. Pending SHPO concurrence, no further archaeological work is warranted.

### *Avoidance and Minimization Measures*

To avoid potential inadvertent damage to portions of site CA-LAK-2190 that are outside the ADI, an Environmentally Sensitive Area (ESA) will be established. Delineation of an ESA may be used to reach a finding of No Adverse Effect in accordance with Stipulation X.B.2 (a)(ii) of the Programmatic Agreement. As a condition for a No Adverse Effect finding, an ESA Action Plan will be developed to ensure that provisions will be implemented for protecting CA-LAK-2190. Prior to ground disturbing activities, ESA fencing will be installed to prevent any type of construction related impacts, or inadvertent encroachment into these areas.

## 2.2 Physical Environment

### 2.2.1 Hydrology and Floodplain

Floodplains are a natural part of the Lake County environment. Protecting the beneficial functions of a floodplain helps reduce the damage caused by floods. Poorly planned development in floodplains can lead to stream bank erosion, degradation of water quality, and loss of property. Since this project encroaches upon a 100-year floodplain at the crossing of Burns Valley Creek, a preliminary floodplain assessment was done to determine whether or not the proposed extension of the existing concrete box culvert would have any potential impacts to the floodplain.

A Preliminary Hydrology Study was prepared for this proposed Road Rehabilitation Project. The study identifies Burns Valley Creek as the largest water drainage, though there are several unnamed natural channels and artificial (i.e. man-made) ditches. Some of the channels contain ephemeral streams (i.e. water is only present during storm events) and some exhibit yearlong flows. Drainage improvements for this project involve rehabilitating and extending the existing culverts within these various water channels, and installing two underdrains within the shoulders.

#### *Regulatory Setting*

Executive Order 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration requirements for compliance are outlined in 23 Code of Federal Regulations 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments
- Risks associated with implementing the action
- Impacts on natural and beneficial floodplain values
- Avoid support of incompatible floodplain development
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The 100-year floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the 100-year floodplain.”

### *Affected Environment*

The project is located in a 100-year floodplain where the highway crosses over Burns Valley Creek. The creek continues underneath State Route 53 through a concrete box culvert with stepped wingwalls and concrete aprons. This box culvert is located at postmile (PM) 4.82. The rest of the project is not within a floodplain.

A Hydrology Study evaluates the changes in drainage patterns, including the rate and amount of surface water runoff, as a result of constructing a project. Water is transported from the project site by a stormwater drainage system that was installed when the highway was originally built. The majority of existing cross-culverts convey stormwater runoff from one side of the highway to the other side. Proposed drainage system improvements involve either replacing or extending the existing culverts and installing subsurface underdrains where deemed necessary. The purpose of installing an underdrain is to alleviate pavement deterioration by removing water from beneath the structural section. The current pavement condition is showing distress on the surface through cracking. Water then seeps or is ejected from beneath the pavement through the cracks. Installing the underdrain will intercept, collect, and discharge the ground water away from the roadway. Terminal and intermediate risers will be placed to facilitate removing debris from the system. Installing the underdrain will require trenching within the shoulder of the highway.

### *Impacts*

The box culvert at Burns Valley Creek overlaps the 100-year floodplain fringe. Shoulder widening of the highway requires reconfiguring the wingwalls and extending the box culvert in an area designated as a floodplain by the Federal Emergency Management Agency (FEMA). Extending the box culvert within the channel is not considered a significant floodplain encroachment because the alignment of the box culvert constitutes a transverse encroachment. Based on hydraulic computer models, extending the box culvert will not support incompatible floodplain development or cause an increase in backwater flows into the FEMA designated floodplain.

### *Avoidance, Minimization, and/or Mitigation Measures*

Understanding hydraulics and hydrology is a necessity for designing drainage structures, such as culverts, that control the flow of water near highway infrastructure. The size and shape of the pipe determines the effectiveness of the culvert, especially during extreme weather events such as major floods and washouts. With the help of a computerized program model that analyzes target water flows and the best design

practices, the optimum hydraulic design will be developed for this drainage system. Hydraulic modeling will be performed for each culvert to show pre-project and post-project conditions for water surface elevation to ensure the drainage improvements do not cause upstream or downstream flooding.

### 2.2.2 Water Quality and Storm Water Runoff

This section summarizes the potential impacts to the surrounding surface waters. There are three main watersheds within Lake County. Each major watershed is composed of smaller hydrological units formed by streams, creeks, and groundwater basins. The water quality of these smaller units is an important indicator of the environmental health of a watershed. Burns Valley Creek is the largest receiving water body within the project limits and is tributary to Clear Lake.

#### *Regulatory Setting*

Section 401 of the Clean Water Act, the primary federal law regulating water quality, requires a water quality certification from the state board or regional board when a project: 1) requires a federal license or permit (a Section 404 permit is the most common federal permit for Caltrans projects), and 2) would result in a discharge to waters of the United States and/or waters of the State.

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES) permit system for the discharge of any pollutant (except dredge or fill material) into waters of the United States. The California Environmental Protection Agency has delegated administration of the federal NPDES program to the State Water Resources Control Board (SWRCB) and nine regional boards. This project is located within the jurisdiction of the SWRCB and the Central Valley Regional Water Quality Control Board (CV-RWQCB). To ensure compliance with Section 402 of the Clean Water Act, the State Water Resources Control Board has adopted a National Pollutant Discharge Elimination System, Statewide Storm Water Permit to regulate storm water discharges and non-storm water discharges from all of Caltrans' right-of-way, activities, properties, and facilities.

In addition, the Statewide Construction General Permit requires a Storm Water Pollution Prevention Plan (SWPPP) for all construction activities that result in one-acre or more of disturbed soil. Since this project would result in a disturbed soil area of more than one acre of land, a SWPPP is required.

Subject to Caltrans' review and approval, the contractor will prepare the Storm Water Pollution Prevention Plan and the Water Pollution Control Program.

Additional laws regulating water quality include the Porter-Cologne Water Quality Act, Safe Drinking Water Act, and Pollution Prevention Act. State water quality laws are codified in the California Water Code, Health and Safety Code, and Fish and Game Code.

### *Affected Environment*

Mining activities, tributary creeks, and surface water runoff have been known to introduce mercury and phosphorus into Clear Lake. Consequently, Clear Lake has been identified under the federal Clean Water Act, Section 303(d) as an impaired water body due to elevated concentrations of mercury and nutrients. An abundance of phosphorus has been linked to the increase in nuisance algae blooms in Clear Lake. Methylmercury concentrations in fish tissue have been addressed as a concern in Clear Lake fish populations. The Central Valley Regional Water Quality Control Board (CV-RWQCB) has amended the Basin Plan to include a Total Maximum Daily Load (TMDL) for methylmercury and phosphorus as constituents of concern in Clear Lake.

Burns Valley Creek and several unnamed channels with ephemeral water flows are within the project limits. Since Burns Valley Creek is a tributary to Clear Lake, there is a potential for mercury and phosphorus-laden sediments to be introduced onto Clear Lake. Existing storm water drainage system will be modified, including the two concrete box culverts, one of which conveys Burns Valley Creek underneath the highway and 44 metal-pipe culverts that range in diameter size from 18-inches to 60-inches in diameter. Construction over or along waterways could cause stream bank erosion and turbidity from bank-side activities.

### *Impacts*

Construction will involve cut and fill earthwork, asphalt paving, installing subsurface drainages, extending and rehabilitating culverts, reconstructing wingwalls, and clearing and grubbing. These disturbance can create loose, unprotected soil, which if not properly managed, can be carried by surface water runoff or wind and could impact adjacent water bodies. The following construction activities have the potential to contribute to a temporary increase in sediment, turbidity, oil, grease, and chemicals to receiving waters:

- Daily contractor activity – Routine construction activities such as material delivery, storage, and usage. Maintenance of construction equipment by cleaning, refueling, and operating heavy equipment. The construction staging area could generate dust, sediments, debris, chemicals and garbage. Equipment fueling has the potential for accidental spills of gasoline or diesel.

- Vegetation clearing and grubbing – Removal or trimming of vegetation would be required for construction and equipment access. Exposed soil is more susceptible to erosion.

- Earthwork – Earthwork includes removal of the topsoil, the creation of engineered cut and fill slopes, stabilizing hillsides, and moving stockpiled materials.

- Culvert modifications – Dewatering the stream channel may be necessary in order for the contractor to remove the culvert.

- Paving activities – Paving operations involve the handling of asphalt products that could enter storm water drainage systems for stormwater runoff.

The potential for long-term impacts on water quality may including the follow:

- Hydrologic impacts – the increase in impervious area will cause an increase in the peak flow and higher runoff volumes that may lead to channel scouring and bank erosion. The result could increase sediment and turbidity in receiving waters.

- Concentration of water runoff – Typical highway drainage systems collect runoff into culverts or ditches and discharge it into receiving waters. Potential impacts from modifying the existing highway drainage system could also cause an increase in peak flow and higher volumes of water runoff.

- Highway runoff – Contaminants generated by traffic, pavement materials, and roadside trash can be carried by runoff into receiving waters.

Collectively, all of these activities can have deleterious effects on the surrounding watershed and streams if stormwater and non-stormwater pollution controls are not in place during the time of construction.

### *Avoidance, Minimization, and/or Mitigation Measures*

Short-term and long-term impacts will be avoided or minimized by implementing measures contained in the standard specifications, special provisions, permit requirements, and the Storm Water Pollution Prevent Plan (SWPPP).

Specifications and Standard Special Provisions require contractors to conduct work in a manner that protects receiving waters. This includes preparation and effective management of a water pollution control program during project construction. For this proposed project, the applicable plan is referred to as a Storm Water Pollution Prevention Plan (SWPPP), which the contractor is required to prepare. The SWPPP will include temporary Best Management Plans (BMPs) the contractor is required to implement during construction. A spill prevention plan would also be required for staging and storage areas.

Short-term impacts will be avoided or minimized through the use of temporary BMPs to control potential releases of pollutants. Applicable to certain types of construction activities, such as vegetation clearing and grubbing, culvert modifications, or paving activities, BMPs can include scheduling, preservation of vegetation, hydraulic mulch, hydroseeding, soil binders, straw mulch, geotextiles, plastic covers, erosion control blankets, silt fence, street sweeping and vacuuming, storm drain inlet protection, wind erosion control, vehicle and equipment cleaning control, vehicle and equipment fueling, vehicle and equipment maintenance controls.

In addition to the BMPs required as part of the SWPPP, pollution prevention BMPs will be incorporated according to the plans and the SWPPP to prevent pollution during construction and to prevent future pollution at the new facility. Pollution prevention BMPs include re-vegetating the disturbed soil and hydraulic design techniques. Hydraulic design techniques, such as flared end sections, rock slope protection, asphalt dikes, overside drains, and paved water conveyances, will reduce erosion.

All Caltrans projects are required to evaluate and consider the design and construction of treatment BMPs. Treatment BMPs are designed to remove pollutants in the storm water. Caltrans uses a Storm Water Data Report (SWDR) to evaluate the treatment BMPs that are most appropriate for the site conditions of the project. Inclusion of these treatment BMPs will avoid or minimize the potential increase of pollutants associated with highway runoff.

In conclusion, overall impacts to water quality are considered less than significant because Caltrans would implement the avoidance and minimization practices contained in the SWPPP and incorporate additional BMPs as appropriate for site conditions. The practices outlined in the Storm Water Management Plan ensure that certain minimum design elements are incorporated into the project to maintain or improve water quality. Implementation of these standard procedures and practices would substantially reduce or eliminate most of the potential impacts associated with the construction of the project.

### 2.2.3 Geology/Soils/Seismic/Topography

Caltrans geotechnical staff have prepared a Preliminary Geotechnical Report to identify potential risks associated with the geological conditions, such as settlement, corrosion properties of the soil, and slope stability, and to evaluate whether this proposed project is subject to geological hazards. This report was based on a literature study and is limited to a general overview of the regional geology and local soils. This section discusses the geology, types of soil, and seismic concerns as they relate to public safety and project design.

#### *Regulatory Setting*

Earthquakes are a prime consideration in the design and retrofit of structures. Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. The current policy is to use the anticipated Maximum Credible Earthquake from young faults in and near California. The Maximum Credible Earthquake is defined as the largest earthquake that can be expected to occur on a fault over a particular period of time.

#### *Affected Environment*

Site Soil and Rock Conditions

Rock units assigned to the Cache Formation occur within the majority of the project limits. The Cache Formation assemblage generally consists of a thick sequence of poorly sorted gravel, silt, clay, and sand. The closest fault is the Cross Springs Fault that crosses State Route 53 near the north end of the project. Rocks on the west side of this seismic fault zone generally consist of varied rock types such as chert, greenstone, greywacke, shale, and metamorphic rocks. Rocks on the east and south side of this fault zone consist of the silts, sands, and gravel deposited by prior

volcanic activities near Clear Lake. At the intersection of SR 53 and SR 20, the deposit changes to alluvial materials that underlie the roadway. Minor amounts of serpentine ultramafic rocks can be found on the northbound shoulder just north of the Polk Street intersection. The serpentine exposure in this area is not obvious due to the presence of relatively thick vegetation and a poorly developed soil horizon that obscures the underlying geological materials in this area. The typical topography of the Cache Formation is steep-sided slopes covered with a terrain of grass and lag gravel. Lag gravel is a geotechnical term used to describe the surface accumulation of coarse gravel produced by the removal of finer particles. This type of geological material can make land formations susceptible to landsliding.

Faults and Seismicity

Based upon the California Seismic Hazard Map (Mualchin, 1996) there are several faults in the vicinity of the project area that have the potential to produce powerful earthquakes. The nearest fault is the Cross Springs Fault that crosses SR 53 near the north end of the project. Although it passes through the project area, apparently, this fault has not shown appreciable movement during the past 1.6 million years.

Rockfall and Slope Stability

When the highway was originally built, several large hills were cut through as part of the corridor development. These cut slopes and embankments will require modification either through excavation or placement of additional fill to accommodate the new roadway dimensions, particularly at the four intersections where local streets Polk Street, Olympic Drive, Old Highway 53, Ogulin Canyon Road connect into SR 53. Dislodging boulders and coarse gravel is a concern whenever a cut is excavated into rock slopes.

### *Impacts*

Depending upon the final horizontal and vertical alignment, particularly at the four intersections, it is expected that existing cut slopes and embankments will be modified. Overall, current conditions of the existing cut slopes appear to be performing well in regard to slope and foundation stability. The geological materials found throughout the project area have high strength characteristics and generally do not exhibit time-dependent settlement. Excavating the existing cut slopes is not expected to adversely affect the slope stability. No blasting is anticipated.

With respect to earthquake potential, seismic activity is considered negligible when evaluating the overall seismic activity of the region because of the historic inactivity of the Cross Springs Fault.

The geologic literature review and field review suggests that some serpentine rocks are present. The chrysotile variety of serpentine rock often contains a form of natural occurring asbestos. If exposed, asbestos can be a health hazard.

### *Avoidance, Minimization, and/or Mitigation Measures*

The preliminary geotechnical study does not indicate that additional excavations will adversely affect the stability of the slopes. If necessary, a site-specific geotechnical study can be prepared to provide recommendations for final slope design. The site-specific study would also identify which soil types must be tested for shrink-swell potential to determine load-bearing and strength concerns. The designer will consider all aspects of slope design to minimize the removal of vegetation, while ensuring an appropriate design that will allow all finished slopes to be stable. The potential exposure to natural asbestos is addressed under Section 2.2.4 Hazardous Waste.

## 2.2.4 Hazardous Waste Materials

This section is based upon the Preliminary Site Investigation titled "Naturally Occurring Asbestos, Aerially Deposited Lead and Landfill Site Investigation Report" prepared by Geocon Consultants (July 2006). The assessment was conducted to identify and evaluate the potential for encountering aerially deposited lead (ADL) and naturally occurring asbestos (NOA), and to determine whether contaminants are present at an abandoned landfill within Caltrans right-of-way.

### *Regulatory Setting*

Many state and federal laws regulate hazardous materials and hazardous wastes. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health, and land use. The primary federal laws regulating hazardous wastes/materials are the Resource Conservation and Recovery Act of 1976 and the Comprehensive Environmental Response, Compensation and Liability Act of 1980. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not

compromised. The Resource Conservation and Recovery Act provides for "cradle to grave" regulation of hazardous wastes. Other federal laws include:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety & Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the laws listed above, Executive Order 12088, Federal Compliance with Pollution Control, mandates that actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction.

### *Affected Environment*

Aerially Deposited Lead (ADL)

State Route 53 is an important traffic artery for northern California. Aerial photos taken over the last several decades show how the land was previously used. A review of these photos indicates that the corridor has supported vehicular activity since the 1950's. Since lead was used as an additive to gasoline prior to 1986, the surface soils along SR 53 have the potential to be contaminated with ADL from the exhaust of cars burning leaded gasoline. In areas where soil has not been disturbed, the ADL is generally limited to the upper 2-feet of soil within unpaved shoulders and median areas. Since widening the roadway prism to install turn-pocket lanes and shoulders

requires extensive earthwork, sampling and analysis for lead contaminated soil was performed.

Naturally Occurring Asbestos (NOA)

The Preliminary Geotechnical Report identified an outcropping of serpentine rock in the northbound shoulder near Polk Street. Naturally occurring asbestos (NOA) is sometimes found in serpentine rock. Because serpentine rock has been identified within the project limits, construction activities have the potential to disturb materials containing NOA. Since NOA potentially poses a health hazard when it becomes an airborne particle, samples of surface soil were collected and analyzed for NOA-containing materials.

Landfill

At the intersection of SR 53 and 40th Avenue on the northwest corner there is an abandoned domestic landfill. The primary contaminants of concern associated with the past landfill activities include semi-volatile organic compounds and toxic metals. Soil containing semi-volatile organic compounds is classified as a California hazardous when the total compound of concern is present at or above the respective regulatory limit set forth in Title 22 of the California Code of Regulations, Chapter 11, Article 3 “Characteristics of Hazardous Waste”, Section 66261.24

### *Impacts*

Collected soil samples showed levels of aerially deposited lead (ADL) and Naturally Occurring Asbestos (NOA) below typical levels of concern for Cal-OHSA standards. NOA was not reported at or above regulatory limits in the samples analyzed, though trace levels of NOA were detected in one sample.

Seventeen soil samples were analyzed for toxic metals following the test methods set by the Environmental Protection Agency. Semi-volatile organic compounds were not reported in soil samples collected from the historic landfill site. Toxic metals, such as arsenic, barium, chromium, cobalt, cooper, lead, nickel, thallium, vanadium, and zinc were detected, but not at concentrations above waste thresholds. Based on these results, disposal of the excavated soil does not need to be treated as a California hazardous waste.

### *Avoidance, Minimization, and/or Mitigation Measures*

There is a potential for construction workers to encounter ADL in unpaved areas that are adjacent to the highway. Provisions will be added to the construction contract requiring the contractor to implement a Health and Safety Lead Compliance Plan to prevent or minimize workers exposure to lead. Compliance with this plan will reduce the potential exposure to lead to a less than significant level. In dealing with soils potentially containing NOA, controls such as wet suppression should be utilized to minimize the aerial dispersion NOA fibers.

## 2.2.5 Noise and Vibration

A traffic noise analysis is required for any state or federal highway project if it is built on a new alignment, or the existing highway alignment significantly changes, or the number of traffic lanes increase. These projects are called Type I Projects, and generally have the potential to increase traffic noise. This proposed Road Rehabilitation Project does not meet the definition of a Type I Project. Therefore, a traffic noise analysis was not conducted.

Since there are a few residential homes and businesses along this strip of highway, a brief discussion has been included to inform the public that a temporary noise increase is inevitable. Based on the type construction activities and equipment required to complete the job, residents and businesses near the highway might hear the construction activities. Even though this project will not generate noise levels in excess to standards set by local, state, or federal regulations, there are policies to protect citizens from excessive noise, even if a project does not have a significant noise impact. For instance, contractors are required to restrict construction activities to the hours between 7:00 a.m. - 7:00 p.m. on weekdays, except for actions taken to prevent or resolve an emergency. Furthermore, construction noise will be minimized because the contractor is required to conform to the provisions of the Caltrans standard specifications titled “Sound Control Requirements”. This specification requires the contractor to comply with all local sound control and noise level rules, regulations, and ordinances. Finally, combustion engines used on the job will be equipped with a muffler recommended by the manufacturer to minimize the noise generated from the operation of heavy construction equipment. Under CEQA provisions, elevated noise levels caused by construction are not considered a significant impact unless the level exceeds a local ordinance. The protective measures mentioned above will help minimize the construction noise.

## 2.3 Biological Environment

This section provides information about biological resources that occur or could occur within the project limits. The study area encompasses approximately 33-acreas. The environmental study limits are shown on mapping in Appendix D. This section also discloses potential impacts to special-status species, oak woodlands, a seasonal wetland, and potential jurisdictional waters of the U.S.

### 2.3.1 Wetlands and Other Waters

All creeks and ditches were inspected by a biologist for jurisdictional characteristics. Within the study area, Burns Valley Creek is the only named intermittent creek channel.

#### *Regulatory Setting*

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Clean Water Act (33 United States Code 1344) is the primary law regulating wetlands and waters. The Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Waters of the United States include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils subject to saturation/inundation). Under normal circumstances, all three parameters must be present for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that no discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the Environmental Protection Agency.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this executive order states that a federal agency, such as the Federal Highway Administration, cannot undertake or provide assistance for new construction located

in wetlands unless the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the California Department of Fish and Game (CDFG) and the Regional Water Quality Control Boards (RWQCB). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission) may also be involved. Sections 1600-1607 of the Fish and Game Code require any agency that proposes a project that would substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the CDFG before beginning construction. If the CDFG determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement would be required. The CDFG jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFG.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB also issue water quality certifications in compliance with Section 401 of the Clean Water Act. Please see the Water Quality Section 2.2.2 for additional details.

### *Affected Environment*

Jurisdictional aquatic resources within the biological study limits are Burns Valley Creek, unnamed ephemeral tributaries to Burns Valley Creek, and a small, perennial stream near Polk Street that is conveyed underneath the highway by a culvert (PM 3.62). Perennial drainages contain standing or flowing water year round, while ephemeral drainages are inundated with water after a storm event. Concentrated flows of this unnamed perennial stream are directed toward the inlet of the culvert through a concrete-lined ditch within the right-of-way. At the culvert outlet, the water is directed through an earthen channel with little gradient that causes water to pool. This has created a seasonal wetland area in the form of a vegetated ditch. Seasonal wetlands are inundated or saturated by standing water for shorter periods during the year, although saturated soils may occur for longer periods. This earthen channel eventually flattens out and regains enough gradient to return to a flowing stream. Vegetation within this seasonal wetland includes common teasel and cattails.

### *Impacts*

Potential impacts to the jurisdictional wetland and other waters include permanent and temporary effects. Due to the need for extending the culverts, permanent impacts include the placement of fill material into the seasonal wetland and waters of the U.S. As a result of construction access routes and staging areas, temporary impacts may include the discharge of sediment, removal of vegetation, and soil compaction. The proposed project will permanently impact approximately 0.01-acre of seasonal wetlands and 0.30-acres of jurisdictional waters of the U.S. The project will also temporarily affect approximately 0.01-acre of seasonal wetlands and 0.19-acres of jurisdictional waters. These acreages are subject to change when details of the project design are refined and finalized. Table 2.1 below summarizes the extent of impacts to waters of the United States, including wetlands.

**Table 2.1: Impacts to Waters of the United States**

| Wetland Type | Approximate Area of Impact (Acres) | |
|---|---|---|
| | Permanent | Temporary |
| **Wetlands** | | |
| Vegetated Ditch | 0.01 | 0.01 |
| **Other Waters of the U.S.** | | |
| Ephemeral Streams | 0.29 | 0.19 |
| **Total** | **0.30** | **0.20** |

### *Avoidance, Minimization, and/or Mitigation Measures*

To the extent practicable, the discharge of dredged or fill material into "waters of the U.S.", including wetlands, will be avoided. This also includes waters not subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) but subject to Regional Water Quality Control Board (RWQCB) jurisdiction. However, complete avoidance is not feasible due to the need to extend the culverts in order to accommodate the wider roadway. Thus, to avoid or minimize the potential for project-related impacts to "waters of the U.S." including wetlands, the contractor and Caltrans must adhere to the following measures:

- Construction activities that will impact "waters of the U.S." must be conducted during the dry season to minimize erosion.

- Appropriate sediment control measures to protect "waters of the U.S." must be in place prior to the onset of construction. These protective barriers between working areas and wet or dry streams will be monitored and

maintained until construction is completed. Temporary stockpiles of excavated or imported material will not be placed in an area where the sediments could enter a wet or dry stream. Stockpiles that remain onsite through the rainy season must be protected to prevent erosion through the use of silt fences, or straw bales.

- Any monitoring, maintenance, and reporting requirements contained in the permits issued by the regulatory agencies (i.e. USACE Section 404 permit, RWQCB 401 certification, and CDFG 1602 Agreement) must be fulfilled.

Compensatory mitigation is required to offset permanent and temporary wetland losses through one or a combination of the following measures: restoring on-site streams, purchasing appropriate credits at an USACE approved mitigation bank, or providing funds into an USACE approved in-lieu fee fund.

### 2.3.2 Plant Species and Oak Trees

Botanical surveys followed the floristic survey protocol recommended by the CDFG (1984) and Nelson (1987) to locate and identify sensitive plant species growing within the biological study area. Survey schedules were based on the known blooming periods of the target species. Field surveys were accomplished by one or two biologists walking wandering transects within the study area. Surveys were conducted in February and April 2005, June, July, September, and October 2006, and January 2007. The purpose of the field surveys was to characterize plant communities, identify noxious weed infestations, and determine whether sensitive plants occur in the study area.

#### *Affected Environment*

Overall, the study area has a relatively low potential to support sensitive plant species based on the level of disturbance from previous and on-going maintenance activities, and the lack of special growing conditions. Caltrans maintenance crews routinely mow and spray herbicides within the right-of-way to control weeds and to prevent the spread of fire. Nevertheless, the CNDDB (2003) indicated that six sensitive plant species have been recorded within two miles of the study area (Table 2.1). Most of these species require specific habitat (i.e. vernal pools) in order to grow. Vernal pools do not occur in the study area. Therefore, the six sensitive plant species are considered to have a very low potential or no potential to occur in the study area.

The biological communities within the project limits are oak woodland, nonnative annual grassland, and ruderal vegetation (such as ornamental trees). The biological communities in the study area that meet the criteria for important natural communities include mixed oak woodland and a seasonal wetland. Nonnative annual grassland, which is considered a common biological community, supports a small diversity of species. Typically, nonnative grasslands re-establish naturally following disturbance. The majority of the study area is comprised of nonnative annual grasslands. These grasslands are an understory for the mixed oak woodland community. Dominant species in the herbaceous community include common wild oats (*Avena fatua)*, soft chess (*Bromus hordeaceous L.*), and ripgut brome (*Bromus diandrus Roth*) with numerous other native and nonnative annuals including yellow star thistle (*Centaurea solstitialis L.*), lupen (*Lupinus sp.*), and clover (*Trifolium sp.*). Nonnative annual grassland within the biological study area provides foraging habitat and cover for many wildlife species, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), woodpeckers (*Melanerpes formicivorus*), black-tail deer (*Odocoilus hemionus*), and coyotes (*Canis latrans*) that are common in the area.

Mixed blue oak and valley oak provide a canopy coverage ranging between 25-39% throughout the project limits. Oak woodlands provide high value to wildlife in the form of nesting sites, protective cover, and foraging areas for food, such as field mice. This community type is commonly used by species that require both woodland and adjacent open areas, such as grasslands. The dominant canopy species are interior live oak (*Quercus wislizenii*), blue oak (*Quercus Douglasii*), and valley oak (*Quercus lobata*). The shrub layer contains scattered poison oak (*Toxicodendron diversilobum*), coyote bush (*Baccharis pilularis*), and manzanita (*Arctostaphylos*). Besides the oak trees being a distinct component of the visual aesthetics, oak woodlands also provide important wildlife habitat.

### *Impacts*

With regard to sensitive plant species within the study area, based on the absence of previously recorded occurrences and the results of botanical field surveys, the discovery of sensitive plant species is not expected.

Oak trees will be removed from the existing and new right-of-way. Preliminary design maps show the proposed the cut and fill lines (Appendix D). Since design is at a preliminary stage, it is difficult to determine exactly which trees will be removed and which trees will remain. Due to the large number of oak trees within the project limits, the area of oak woodlands was calculated into acres instead of an individual

tree count. The project limits cover 33-acres. Realizing that not every single oak tree will be removed, the following estimate represents a worst case scenario.

A maximum of 33-acres of oak woodlands could be removed to accommodate the wider roadway and associated cut slopes. As a general description of the region, Lake County is covered by at least 20% oak woodlands. However, oak woodlands within the county are being eradicated due to the conversion to vineyards and pastures, harvesting for wood, and community development.

### *Avoidance and Minimization Measures*

The removal of oak trees will be minimized to the greatest extent possible. In order to compensate for the loss of oak trees and satisfy the intent of Senate Resolution 17, compensation will be provided by utilizing oak woodland creation balanced with the preservation of existing oak woodlands. Compensation for oak trees removed could include a combination of plausible options. One option is oak woodland creation, meaning the establishment of newly planted oak trees. Oak woodland creation would occur at a 1:1 ratio. Another option is oak woodland preservation, either through an easement or acquired land, to preserve oak trees already established. Oak woodland preservation would occur at a 3:1 ratio. The 3:1 ratio means 3-acres of oak woodlands would be preserved for every 1-acre of oak woodlands removed. As project design elements are further refined, a more accurate acreage loss of oak woodlands will be calculated. Compensation will be based on the actual loss of oak woodland acres.

## Table 2.2 Sensitive Plant Species Potentially Occuring within the Study Area

| Scientific Name | Common Name | Status | | | General Habitat Description | Habitat Present/ Absent | Rationale |
|---|---|---|---|---|---|---|---|
| | | Federal | State | CNPS | | | |
| *Eryngium constancei* | Loch Lomond coyote-thistle | E | E | | Specific vernal pools in lake and sonoma counties | A | Suitable habitat not present |
| *Lasthenia burkei* | Burke's goldfields | E | E | 1B | Vernal pools and depressions | A | Suitable habitat not present |
| *Navarretia leucocephala* ssp. *Pauciflora* | Few-flowered navarretia | E | T | 1B | Vernal Pools with volcanic substrates, usually volcanic ash | A | Suitable habitat not present |
| *Navarretia leucocephala* ssp. *Plieantha* | Many-flowered navarretia | E | E | 1B | Dry meadows along margins of volcanic ash vernal pools, lakes, and in open wet ground in open forests | A | Suitable habitat not present |
| *Parvisedum leiocarpum* | Lake County stonecrop | E | | | Vernal pools and depressions | A | Suitable habitat not present |
| *Martes pennanti* | Fisher | SC | | | Coniferous and mixed forests | A | Suitable habitat not present |
| *Eryngium constancei* | Loch Lomond coyote-thistle | E | E | | Specific vernal pools in Lake and Sonoma counties | A | Suitable habitat not present |
| *Lasthenia burkei* | Burke's goldfields | E | E | 1B | Vernal pools and depressions | A | Suitable habitat not present |

Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.

### 2.3.3 Animal Species

This section identifies the sensitive wildlife species that could potentially occur in the study area. The identification of these species was based on a review of existing information, including a search of the California Natural Diversity Data Base (CNDDB 2006), USFWS threatened and endangered species list, coordination with agency personnel, and various biological field reviews. Based on the existing information, six sensitive wildlife species were identified as having the potential to occur within the vicinity of the project. Table 2.2 outlines the six wildlife species that are listed as threatened or endangered under the federal or Californian Endangered Species Act, the species preferred habitat, and potential to occur within the study area.

#### *Affected Environment*

Of the six sensitive wildlife species identified, five species were determined not to occur within the project limits because suitable habitat is absent because the project is outside the species known range of occurrence. Therefore, there is no further discussion of these five species in this environmental document. An explanation for the absence each of these species is present in the Table 2.2. The only sensitive species that might be present in the project area is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) that is federally listed as threatened with extinction. Further discussion of this species is provided under the Section 2.3.4 titled "Threatened and Endangered Species".

Non-sensitive migratory birds and raptors have the potential to nest in the trees and shrubs throughout the study area. Although these birds are not considered special-status wildlife species, California Fish and Game code sections 3503 and 3503.5 and the Migratory Bird Treaty Act protect their eggs and occupied nests.

#### *Impacts*

No anadromous fish (i.e. migratory fish, such as salmon and steelhead, that breed in fresh water and spend a portion of their lives in the ocean) will be affected because the Burns Valley Creek and the smaller, ephemeral drainages do not connect to a body of water that supports anadromous fish.

Construction of the proposed project will result in the removal of trees that are large enough to provide suitable habitat for nesting birds. If these trees and other types of vegetation were removed during the breeding season, there could be an impact to raptors (i.e. birds of prey such as owls, hawks, falcons, osprey) or migratory birds

attempting to nest. The Migratory Bird Treaty Act (MBTA) is an environmental law that affords protection to non-sensitive migratory birds and raptors. Since these birds have the potential to nest in the trees, box culverts, or vegetation within the project limits, Caltrans will implement measures to avoid conflicts with the nesting season. Typically, the nesting season is February 15th through September 1st.

### *Avoidance, Minimization, and/or Mitigation Measures*

To ensure that potential impacts to birds nesting in the area are less than significant, and that unauthorized harm to legally protected birds does not occur, Caltrans will implement the following measure:

- Tree removal will take place prior to February 15th (before nesting season begins) or after September 1st when the nesting season has ended. If any work on structures (such as box culverts) is to take place during the nesting season, measures will be taken to prevent migratory birds from creating or occupying nests.

## 2.3.4 Threatened and Endangered Species

Valley elderberry longhorn beetle (VELB) was once common throughout the Central Valley; however, clearing for agricultural and urban development has removed over 90 percent of the riparian habitat in the Central Valley and the remaining habitat is fragmented. The VELB is thought to be completely dependent upon its host plant, the blue elderberry shrub (*Sambuscus mexicana*). According to the USFWS (1984) Recovery Plan, it is believed that adults emerge from pupation inside the wood of these shrubs in the spring, making distinctive small, oval openings that may be the only indication of the species occurring. The VELB occupies a relatively small proportion of the elderberry shrubs that occur within its range, but detection of the beetle in any individual shrub is problematic. Therefore, consistent with existing USFWS protocols, Caltrans treats all elderberry shrubs as if the beetle were present and mitigates any unavoidable effects to elderberry shrubs.

### *Affected Environment*

The valley elderberry longhorn beetle (VELB) was determined to have a potential to occur within the project limits since elderberry shrubs (i.e. specific habitat) were

## Table 2.3 Sensitive Animal Species Potentially Occuring within Study Area

| Scientific Name | Common Name | Status | | | General Habitat Description | Habitat Present/ Absent | Rationale |
|---|---|---|---|---|---|---|---|
| | | Federal | State | CNPS | | | |
| *Desmocerus californicus dimorphus* | valley elderberry longhorn beetle | T | | | Elderberry Shrubs | P | No historical presence. Shrubs are isolated and outside of riparian areas. |
| *Syncaris pacifica* | California freshwater shrimp | E | E | | Low elevation, low gradient streams | A | No historical presence, lack of habitat |
| *Rana aurora draytonii* | California red-legged frog | T | | | Dense, shrubby, or emergent vegetation associated with deep still or slow moving water | A | Suitable habitat not present |
| *Haliaeetus leucocephalus* | bald eagle | T | E | | Near lakes, rivers, or large water bodies with suitable trees for nesting | A | Suitable habitat not present |
| *Hypomesus transpacificus* | delta smelt | T | T | | Esturine waters, freshwater, and brackish waters | A | Natural barriers |
| *Strix occidentalis caurina* | Northern spotted owl | T | | | Thickly wooded canyons and forests | A | Suitable habitat not present |

Absent [A] means no further work needed. Present [P] means general habitat is present and species may be present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS), etc.

identified within the project limits. A total of nine elderberry shrubs were found. Two elderberry shrubs are within Caltrans right-of-way, the other seven shrubs are on private property. Within Caltrans right-of-way near PM 3.8 there is an individual shrub. Outside of the Caltrans right-of-way, bordering near the barbed-wired fence that delineates private property from State property, there is a grouping of elderberry shrubs near PM 4.0. Branches from an individual shrub overhang the right-of-way fence, but the stem base is outside of the right-of-way (PM 5.0). Another individual shrub is growing on top of a slope near a PG&E electrical pole, north of the post mile marker (PM 5.0) just outside of the right-of-way fence. Elderberry shrubs growing within 100-feet of the project footprint were mapped with a GPS unit and plotted onto an aerial photograph (Appendix E). These isolated shrubs all occur outside of riparian areas, and no exits holes were identified.

The USFWS Conservation Guidelines for VELB (July 1999) define complete avoidance as no construction-related activities within 100-feet of the dripline of suitable habitat (i.e. elderberry plants with branch stems having a diameter of 1-inch or more). Therefore, any disturbance within 100-feet of an elderberry plant's drip line could result in a "*may affect, but not likely to adversely affect*" VELB finding but this finding does not necessarily mean that a "take" of VELB will result. "Take" is a specific term used by biologists and is defined by the California Department of Fish and Game code as an action that leads to harm or death of an engendered species. Before any disturbance within the 100-foot buffer is considered, USFWS must be consulted regarding the effects of the project. Since a 100-foot barrier cannot be maintained for the nine elderberry shrubs, Caltrans has initiated consultation with USFWS for concurrence with the determination that the project "*may effect, but not likely to adversely affect*" the VELB.

### *Impacts*

It is anticipated that construction work will occur within 20-feet of the dripline of the elderberry shrubs; however, pruning or direct removal of the shrubs is not necessary. Construction activities that are considered by the USFWS to cause varying degrees of impacts to VELB include ground compaction from heavy equipment moving over the root system that could cause permanent damage to the shrub. Potential indirect effects to VELB include dust accumulation on the branches and leaves caused by ground disturbing activities such as removing vegetation, grading, and stockpiling. These construction activities and the related indirect effects could result in the subsequent death of the elderberry shrubs and loss of VELB habitat.

### *Avoidance, Minimization, and/or Mitigation Measures*

All elderberry shrubs will be identified as Environmentally Sensitive Areas (ESA) through the use of brightly colored, plastic mesh fencing. For the seven elderberry shrubs outside of the Caltrans right-of-way, an ESA fence will be installed along the barbed-wire fence that separates State property from private property. For the two elderberry shrubs within Caltrans right-of-way, it is expected that construction will occur within 20-feet of the dripline. For work that will occur within the "core avoidance area" (i.e. work would occur within 20-feet of the dripline), standard contract provisions and Best Management Practices will be employed to minimize airborne dust. The contractor and work crews will be instructed concerning the need to avoid damaging the protected elderberry shrubs. Periodically during construction, a biologist will inspect the shrubs to assure that the protective fencing is being maintained. Caltrans will compensate for impacts to VELB in accordance with the *1997 Programmatic Biological Opinion for VELB.* Protective measures, as outlined in the *1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, will be implemented.

## 2.3.5 Invasive Species

### *Regulatory Setting*

On February 3, 1999, President Clinton signed Executive Order 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the state's noxious weed list to define the invasive plants that must be considered as part of the National Environmental Policy Act analysis for a proposed project.

### *Affected Environment*

Most of the project area has been altered by past highway and community development. Throughout the area, exotic and invasive weeds such as yellow star-thistle (*Centaurea solstitialis*), medusa head (*Taeniatherum caputmedusae*), and Bermudagrass (*Cynodon dactylon*) are present.

### *Impacts*

Due to construction activities, populations of non-native, invasive grasses will be removed. Construction equipment not properly cleaned before entering a new site could risk the introducing nonnative species to the area.

### *Avoidance, Minimization, and/or Mitigation Measures*

In compliance with the Executive Order on Invasive Species (Executive Order 13112) and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed on the California List of Noxious Weeds. Measures to control invasive exotic plants would be implemented according to the Caltrans Landscape Architect's recommendations. None of the species on the California list of noxious weeds is currently used by Caltrans for erosion control or landscaping in Lake County.

# Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project has been accomplished through a variety of formal and informal methods. This chapter summarizes the results of Caltrans' efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

## Resource Agency Coordination

Mary Hammer, USFWS, was contacted in January 2007 to discuss the elderberry shrubs that occur within the project limits. The Federal Highway Administration and Caltrans initiated consultation with USFWS for potential impacts to VELB pursuant to Section 7 of the Endangered Species Act in March, 2007.

Concurrence from the State Historic Preservation Officer on the findings in the Historic Property Survey Report is pending.

## Tribal Coordination

Contract with representatives of local Native American groups, based on a contact list provided by the Native American Heritage Commission, consisted of a series of letters and phone conversations. In an effort to seek input from the Lake County Historical Society, a letter was sent on September 8, 2005.

## Public Participation

This Initial Study will be available for public and agency review and comment for 30 days. Comments received during this period will be considered prior to approval of the project.

# Chapter 4 List of Preparers

The following Caltrans District 3, North Region staff were involved in the preparation of this document:

Laura Walsh, Associate Environmental Planner. Contribution: document writer.

Susan Bauer, Senior Environmental Planner. Contribution: environmental branch chief.

Erin Dwyer, Associate Environmental Planner (Archaeology). Contribution: Historic Property Survey Report (HPSR).

Mark Melani, Associate Environmental Planner. Contribution: Preliminary Site Investigation for Hazardous Waste.

Frank Meraz, Environmental Planner. Contribution: Natural Environmental Study, Biological Assessment.

Sharon Tang, Transportation Engineer Technician. Contribution: Air Quality and Noise Study.

Ted Schultz, Transportation Engineer Civil. Contribution: Water Quality Report

Patrice Stafford, Transportation Engineer Civil, P.E. Contribution: Project Engineer.

Glenn Hurlburt, Transportation Engineer Civil. Contribution: Preliminary Hydraulic Study.

Jim Hibbert, Landscape Architect. Contribution: Visual Impacts Assessment.

Mark Suchanek, Transportation Engineer Civil Traffic Safety Office. Contribution: Traffic Safety Analysis.

Mike Yancheff, Landscape Architect Senior. Contribution: Project Manager

<u>Consultants</u>

Pacific Legacy, Inc. - Phase II Evaluation at Prehistoric Archaeological Site, Will Shapiro, Lead Archeologist

Geocon Consultants, Inc.- Site Investigation Report Hazardous Waste

# Appendix A California Environmental Quality Act Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The California Environmental Quality Act impact levels include “potentially significant impact,” “less than significant impact with mitigation,” “less than significant impact,” and “no impact.”

Supporting documentation of all California Environmental Quality Act checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment. Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| **AESTHETICS -** Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | | | | X |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway? | | | | X |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | | | X | |
| d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area? | | | | X |
| **AGRICULTURE RESOURCES -** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | | | | X |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | | X |
| c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | | | | X |
| **AIR QUALITY -** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | X |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | | | X |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? | | | | X |
| d) Expose sensitive receptors to substantial pollutant concentration? | | | | X |
| e) Create objectionable odors affecting a substantial number of people? | | | | X |
| **BIOLOGICAL RESOURCES -** Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | X | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | X | |
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | X | |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | | X |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | X | |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | ☐ | ☐ | ☐ | X |
| **COMMUNITY RESOURCES -** Would the project: | | | | |
| a) Cause disruption of orderly planned development? | ☐ | ☐ | ☐ | X |
| b) Be inconsistent with a Coastal Zone Management Plan? | ☐ | ☐ | ☐ | X |
| c) Affect lifestyles or neighborhood character or stability? | ☐ | ☐ | ☐ | X |
| d) Physically divide an established community? | ☐ | ☐ | ☐ | X |
| e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group? | ☐ | ☐ | ☐ | X |
| f) Affect employment, industry, or commerce, or require the displacement of businesses or farms? | ☐ | ☐ | ☐ | X |
| g) Affect property values or the local tax base? | ☐ | ☐ | ☐ | X |
| h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites, or sacred shrines? | ☐ | ☐ | ☐ | X |
| i) Result in alterations to waterborne, rail, or air traffic? | ☐ | ☐ | ☐ | X |
| j) Support large commercial or residential development? | ☐ | ☐ | ☐ | X |
| k) Affect wild or scenic rivers or natural landmarks? | ☐ | ☐ | ☐ | X |
| l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)? | ☐ | ☐ | X | ☐ |
| **CULTURAL RESOURCES -** Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | ☐ | ☐ | ☐ | X |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | | | X | |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | | X |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | | | | X |
| **GEOLOGY AND SOILS -** Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | X |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | | | | X |
| ii) Strong seismic ground shaking? | | | | X |
| iii) Seismic-related ground failure, including liquefaction? | | | | X |
| iv) Landslides? | | | X | |
| b) Result in substantial soil erosion or the loss of topsoil? | | | X | |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse? | | | X | |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. | | | | X |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | | | | X |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| **HAZARDS AND HAZARDOUS MATERIALS -** Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | ☐ | ☐ | X | ☐ |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | ☐ | ☐ | X | ☐ |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school? | ☐ | ☐ | ☐ | X |
| d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | ☐ | ☐ | ☐ | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | X |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | ☐ | ☐ | ☐ | X |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | ☐ | ☐ | ☐ | X |
| h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | ☐ | ☐ | ☐ | X |
| **HYDROLOGY AND WATER QUALITY -** Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | X | ☐ |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☐ | X |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite? | ☐ | ☐ | X | ☐ |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite? | ☐ | ☐ | X | ☐ |
| e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | X | ☐ |
| f) Otherwise substantially degrade water quality? | ☐ | ☐ | ☐ | X |
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☐ | X |
| h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows? | ☐ | ☐ | X | ☐ |
| i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☐ | X |
| j) Inundation by seiche, tsunami, or mudflow? | ☐ | ☐ | ☐ | X |
| **LAND USE AND PLANNING -** Would the project: | | | | |
| a) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | ☐ | ☐ | ☐ | X |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| b) Conflict with any applicable habitat conservation plan or natural community conservation plan? | | | | X |
| **MINERAL RESOURCES -** Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | X |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | | | | X |
| **NOISE -** Would the project result in: | | | | |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | X | |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | X | |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | | X |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |
| f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | | X |
| **POPULATION AND HOUSING -** Would the project: | | | | |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | ☐ | ☐ | ☐ | X |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | X |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | ☐ | ☐ | ☐ | X |
| **PUBLIC SERVICES -** | | | | |
| a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: | | | | |
| Fire protection? | ☐ | ☐ | ☐ | X |
| Police protection? | ☐ | ☐ | ☐ | X |
| Schools? | ☐ | ☐ | ☐ | X |
| Parks? | ☐ | ☐ | ☐ | X |
| Other public facilities? | ☐ | ☐ | ☐ | X |
| **RECREATION -** | | | | |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | ☐ | ☐ | ☐ | X |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | ☐ | ☐ | ☐ | X |
| **TRANSPORTATION/TRAFFIC -** Would the project: | | | | |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | ☐ | ☐ | ☐ | X |
| b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | ☐ | ☐ | ☐ | X |
| c) Result in a change in air traffic patters, including either an increase in traffic levels or a change in location that results in substantial safety risks? | ☐ | ☐ | ☐ | X |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)? | ☐ | ☐ | ☐ | X |
| e) Result in inadequate emergency access? | ☐ | ☐ | ☐ | X |
| f) Result in inadequate parking capacity? | ☐ | ☐ | ☐ | X |
| g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | ☐ | ☐ | ☐ | X |

**UTILITY AND SERVICE SYSTEMS -** Would the project:

| | | | | |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | ☐ | ☐ | ☐ | X |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | X |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | ☐ | ☐ | ☐ | X |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | ☐ | ☐ | ☐ | X |
| e) Result in determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | ☐ | ☐ | ☐ | X |

| | Potentially significant impact | Less than significant impact with mitigation | Less than significant impact | No impact |
|---|---|---|---|---|
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | ☐ | ☐ | ☐ | X |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | ☐ | ☐ | ☐ | X |

**MANDATORY FINDINGS OF SIGNIFICANCE -**

| | | | | |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | ☐ | X | ☐ | ☐ |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? | ☐ | ☐ | ☐ | X |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | ☐ | ☐ | X | ☐ |

# Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

**DEPARTMENT OF TRANSPORTATION**
OFFICE OF THE DIRECTOR
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P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
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*Flex your power!*
*Be energy efficient!*

January 14, 2005

**TITLE VI**
**POLICY STATEMENT**

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

WILL KEMPTON
Director

*"Caltrans improves mobility across California"*

# Appendix C Minimization and/or Mitigation Summary

## Land Use

Approximately 26 parcels would be subject to permanent right-of-way acquisition. Additional offsets may occur during the final design stage to further narrow the footprint. Property owners who are affected by right-of-way acquisition will be compensated the fair market value for the portion of land acquired by Caltrans.

The proposed project will modify the intersections where local streets and private driveways connect into the highway. Although these changes will not conflict with any future project planned by the Lake County City Area Planning Council, which is the Regional Transportation Planning Agency (RTPA) for the Lake County region, construction may cause a change in traffic patterns due to temporary lane closures. If lengthy delays are anticipated, the contractor will be required to place appropriate signage to notify motorists that traffic may be subject to delay. In addition, the contractor will be required to maintain at least one point of entry to residences and businesses during construction.

## Visual/Aesthetics

Even though the highway has not yet been officially designated as a Scenic Highway, every effort should be made to maintain and enhance the scenic quality of this section of highway. To minimize the degree of visual change and reduce impacts to a less than significant level, Caltrans Landscape Architecture recommends a combination of the following to minimize the visual changes:

- Consider medium to large cut or fill slopes at 2:1 distance to height ratio. Unlike 4:1 slopes that require more ground disturbance, steeper slopes would lessen the amount of native vegetation that needs to be removed.

- A retaining wall with an aesthetic treatment should be considered at the intersection of SR 53 and Olympic Drive to avoid impacts to the adjacent buildings. The aesthetic treatment should be similar to existing retaining walls at the intersection of SR 29 and SR 53, or the retaining wall along SR 20 in the community of Nice.

- Areas stripped of native vegetation should be replanted, where possible. The landscape architect and the biologist will identify potential sites for re-establishing plants onsite. Candidate sites would be located within Caltrans right-of-way and outside of the clear recovery zone. If there is inadequate area, other locations for re-planting should be identified. These locations should be as close to the project area as possible. Another alternative would be to provide a monetary amount into preserving existing oak woodlands.

## Cultural Resources

To avoid potential inadvertent damage to portions of site CA-LAK-2190 that are outside the ADI an Environmentally Sensitive Area (ESA) will be established. Delineation of an ESA may be used to reach a finding of No Adverse Effect in accordance with Stipulation X.B.2 (a)(ii) of the Programmatic Agreement. As a condition for a No Adverse Effect finding, an ESA Action Plan will be developed to ensure that provisions will be implemented for protecting CA-LAK-2190. Prior to ground disturbing activities, ESA fencing will be installed to prevent any type of construction related impacts, or encroachment into these areas.

## Hydrology and Floodplain

Understanding hydraulics and hydrology is a necessity for designing drainage structures, such as culverts, that control the flow of water near highway infrastructure. The size and shape of the pipe determines the effectiveness of the culvert, especially during extreme weather events such as major floods and washouts. With the help of a computerized program model that analyzes target water flows and the best design practices, the optimum hydraulic design will be developed for this drainage system. Hydraulic modeling will be performed for each culvert to show pre-project and post-project conditions for water surface elevation to ensure the drainage improvements do not cause upstream or downstream flooding.

## Water Quality and Stormwater Runoff

Overall impacts to water quality are considered less than significant because Caltrans would implement the avoidance and minimization practices contained in the SWPPP and incorporate additional BMPs as appropriate for site conditions. The practices outlined in the Storm Water Management Plan ensure that certain minimum design elements are incorporated into the project to maintain or improve water quality. Implementation of these standard procedures and practices would substantially reduce

or eliminate most of the potential impacts associated with the construction of the project.

## Geology/Soils/Seismic/Topography

The preliminary geotechnical study does not indicate that additional excavations will adversely affect the stability of the slopes. If necessary, a site-specific geotechnical study can be prepared to provide recommendations for final slope design. The site-specific study would also identify which soil types must be tested for shrink-swell potential to determine load-bearing and strength concerns. The designer will consider all aspects of slope design to minimize the removal of vegetation, while ensuring an appropriate design that will allow all finished slopes to be stable.

## Hazardous Waste Materials

There is a potential for construction workers to encounter ADL in unpaved areas that are adjacent to the highway. Provisions will be added to the construction contract requiring the contractor to implement a Health and Safety Lead Compliance Plan to prevent or minimize workers exposure to lead. Compliance with this plan will reduce the potential exposure to lead to a less than significant level. In dealing with soils potentially containing NOA, controls such as wet suppression should be utilized to minimize the aerial dispersion of NOA fibers.

## Wetlands and Other Waters

Direct and indirect impacts to wetlands and jurisdictional waters will be minimized by the following measures: (1) Construction activities that will impact “waters of the U.S.” must be conducted during the dry season to minimize erosion. (2) Appropriate sediment control measures to protect “waters of the U.S.” must be in place prior to construction. These protective barriers between working areas and wet or dry streams will be monitored and maintained until construction is completed. Temporary stockpiles of excavated or imported material will not be placed in an area where the sediments could enter a wet or dry stream. Stockpiles that remain onsite through the rainy season must be protected against erosion through the use of silt fences or straw bales. (3) Any monitoring, maintenance, and reporting requirements contained in the permits issued by the regulatory agencies (i.e. USACE Section 404 permit, RWQCB 401 certification, and CDFG 1602 Agreement) must be fulfilled. Compensatory mitigation will be necessary to offset permanent and temporary wetland losses through one or a combination of the following measures: restoring on-site streams,

purchasing appropriate credits at an USACE approved mitigation bank or appropriate payment into an USACE approved in-lieu fee fund. The amount of avoided waters to be permanently protected shall be sufficient to offset the impact and shall be determined by the USACE and the applicant during the permitting process.

## Oak Trees and Animal Species

The removal of oak trees will be minimized to the greatest extent possible. In order to compensate for the loss of oak trees and satisfy the intent of Senate Resolution 17, compensation will be provided by utilizing oak woodland creation balanced with the preservation of existing oak woodlands. Compensation for oak trees removed could include a combination of plausible options. One option is oak woodland creation, meaning the establishment of newly planted oak trees. Oak woodland creation would occur at a 1:1 ratio. Another option is oak woodland preservation, either through an easement or acquired land, to preserve oak trees already established. Oak woodland preservation would occur at a 3:1 ratio. The 3:1 ratio means 3-acres of oak woodlands would be preserved for every 1-acre of oak woodlands removed. As project design elements are further refined, a more accurate acreage loss of oak woodlands will be calculated. Compensation will be based on the actual loss of oak woodland acres.

To ensure that potential impacts to birds nesting in the area are less than significant, and that unauthorized harm of legally protected birds does not occur, Caltrans will implement the following measure:

Tree removal will take place prior to February 15$^{th}$ (before nesting season begins) or after September 1$^{st}$ when the nesting season has ended. If any work on structures (such as box culverts) is to take place during the nesting season, measures will be taken to prevent migratory birds from creating or occupying nests.

All elderberry shrubs will be identified as Environmentally Sensitive Areas (ESA) through the use of brightly colored, plastic mesh fencing. For the seven elderberry shrubs outside of the Caltrans right-of-way, an ESA fence will be installed along the barbed-wire fence that separates State property from private property. For the two elderberry shrubs within Caltrans right-of-way, it is expected that construction will occur within 20-feet of the dripline. For work that will occur within the “core avoidance area” (i.e. work would occur within 20-feet of the dripline), standard contract provisions and Best Management Practices will be employed to minimize airborne dust. The contractor and work crews will be instructed concerning the need

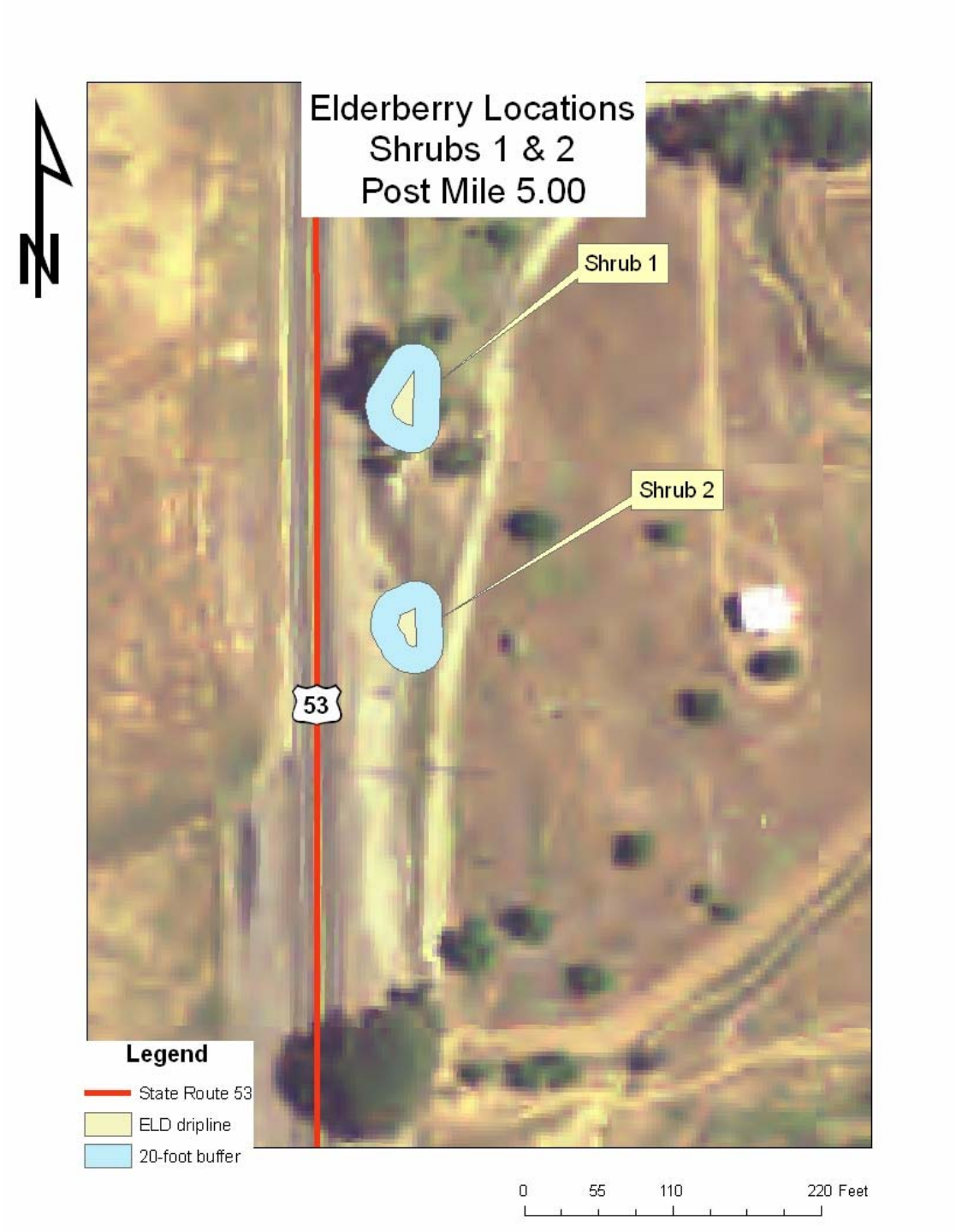
to avoid damaging the protected elderberry shrubs. Periodically during construction, a biologist will inspect the shrubs to assure that the protective fencing is being maintained. Caltrans will compensate for impacts to VELB in accordance with the *1997 Programmatic Biological Opinion for VELB.* Protective measures, as outlined in the 1999 *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, will be implemented.

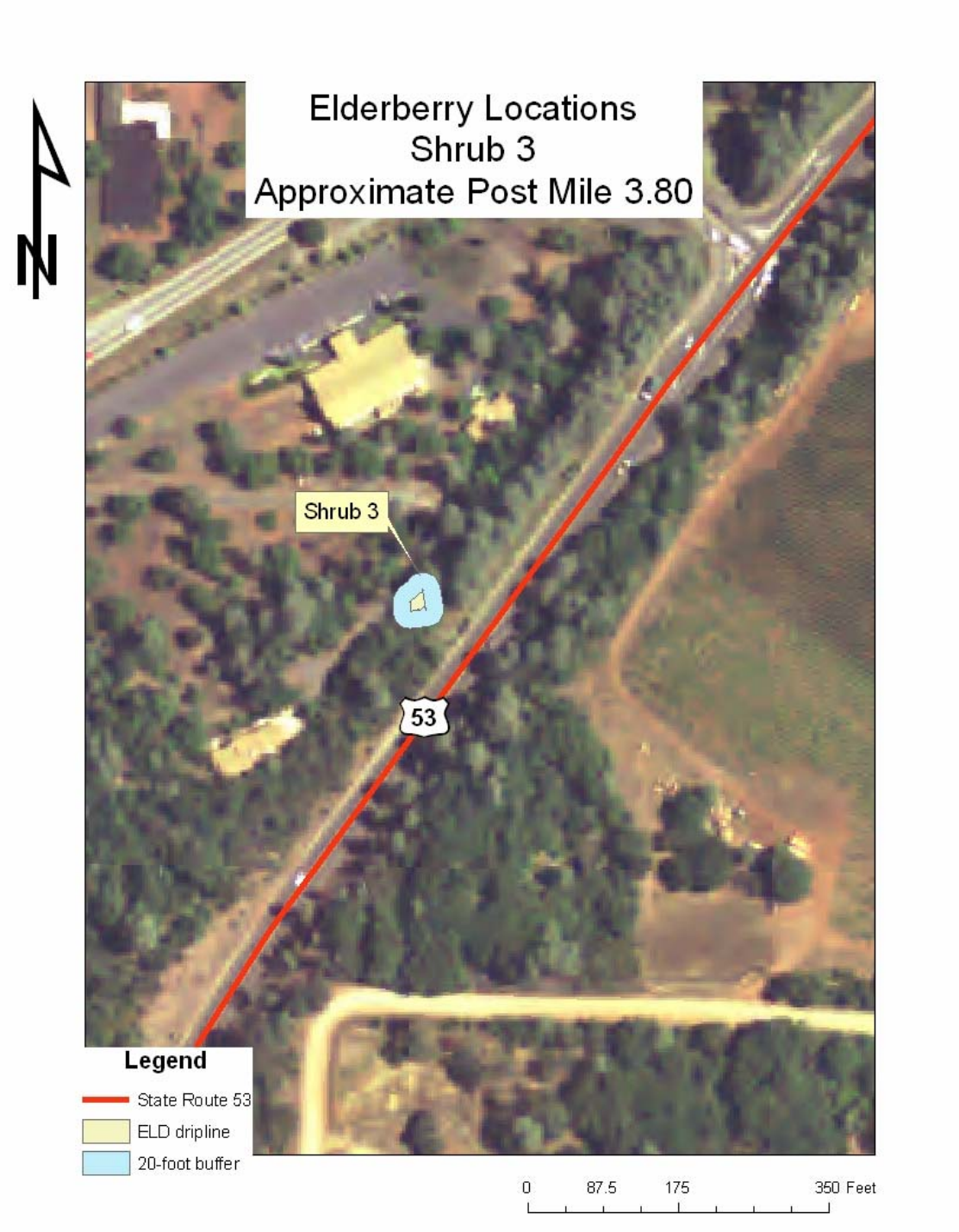
## Invasive Species

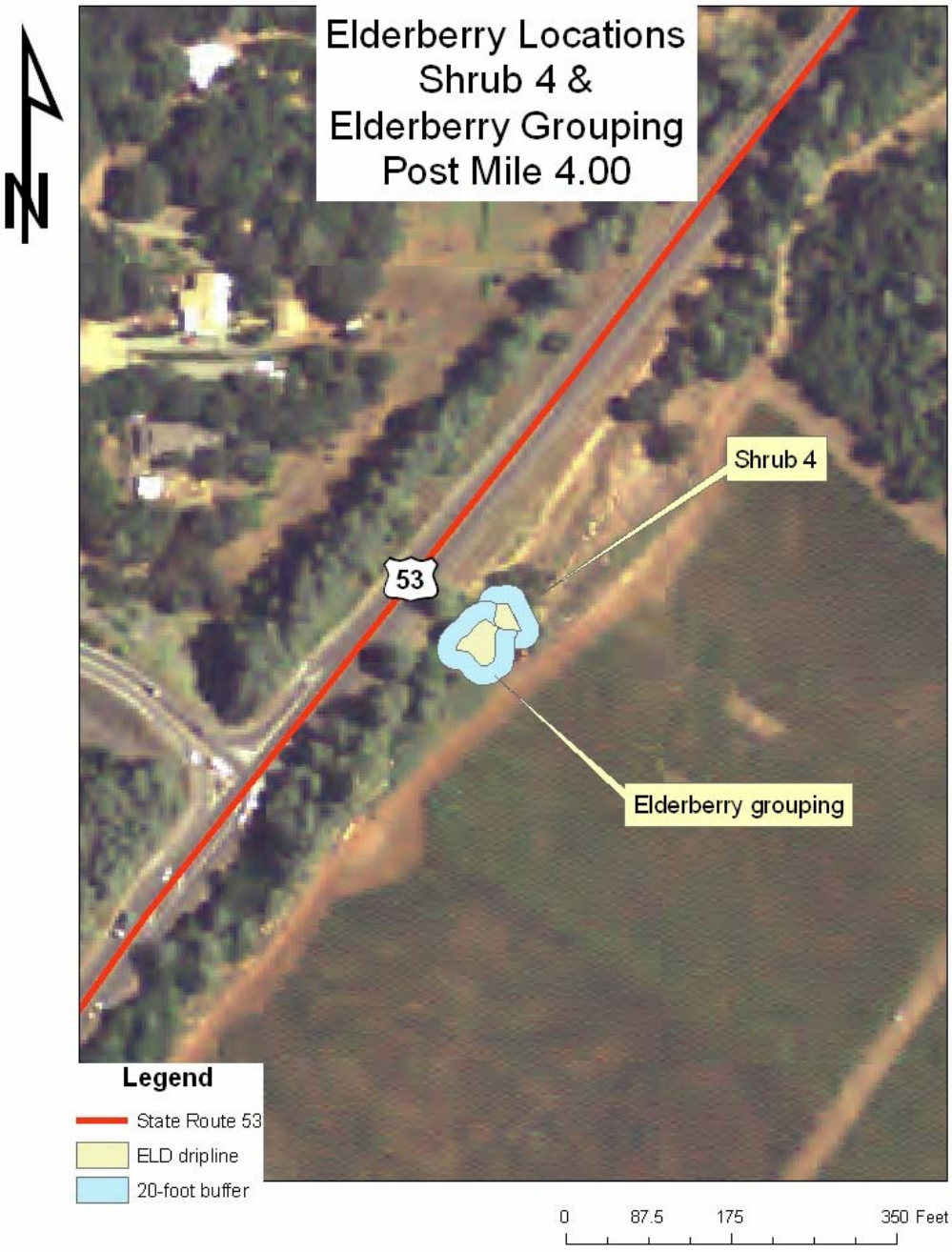
In compliance with the Executive Order on Invasive Species (Executive Order 13112) and subsequent guidance from the Federal Highway Administration, the landscaping and erosion control included in the project would not use species listed on the California List of Noxious Weeds. Measures to control invasive exotic plants would be implemented according to the Caltrans Landscape Architect's recommendations. None of the species on the California list of noxious weeds is currently used by Caltrans for erosion control or landscaping in Lake County.

# Appendix D Mapping of Environmental Study Limits

# Appendix E Maps of Elderberry Shrubs




Elderberry Locations
Shrub 3
Approximate Post Mile 3.80
N
Shrub 3
53
Legend
State Route 53
ELD dripline
20-foot buffer
0
87.5
175
350 Feet


Elderberry Locations
Shrub 4 &
Elderberry Grouping
Post Mile 4.00
N
Shrub 4
53
Elderberry grouping
Legend
State Route 53
ELD dripline
20-foot buffer
0
87.5
175
350 Feet

# List of Technical Studies that are Bound Separately

Air Quality Report
Noise Study Report
Water Quality Report
Natural Environment Study
Biological Assessment
Location Hydraulic/Floodplain Study
Historical Property Survey Report

- Historic Architectural Survey Report
- Archaeological Survey Report
- Phase II Investigations at CA-LAK-2190 for the 03-LAK-53 Road Rehabilitation Project (Confidential)

Hazardous Waste Reports:

- Initial Site Assessment
- Preliminary Site Investigation (Geophysical Survey)

Scenic Resource Evaluation/Visual Assessment
Preliminary Geology Recommendation

Copies of these reports, except for confidential cultural resource reports, are available for review at the Caltrans District 3 North Region, Environmental Division, 703 B Street, Marysville, CA 95901.